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T-656 P08/13 U-569

Applic. No. 10/010,164
Amdt. dated January 15, 2004
Reply to Office action of October 15, 2003

Remarks/Arguments:

Reconsideration of the application is requested.

Claims 1-18 remain in the application. Claim 2 has been amended.

In the third paragraph on page 2 of the above-identified Office action, claim 2 has been rejected as being indefinite under 35 U.S.C. § 112.

More specifically, the Examiner has stated that in claim 2, there is insufficient antecedent basis for the limitation "standard pin alignment". Claim 2 has been amended so as to facilitate prosecution of the application, and now reads "standard pin assignment". Therefore, the rejection has been overcome.

It is accordingly believed that the claims meet the requirements of 35 U.S.C. § 112, first and second paragraphs. Should the Examiner find any further objectionable items, counsel would appreciate a telephone call during which the matter may be resolved. The above-noted changes to the claims are provided solely for cosmetic or clarificatory reasons. The changes are not provided for overcoming the prior art nor

01-15-04 14:03 FROM-Lerner & Greenberg +9549251101 T-656 P09/13 U-569

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for any reason related to the statutory requirements for a patent.

In the last paragraph on page 2 of the Office action, claims 1 and 18 have been rejected as being fully anticipated by Kozuka (U.S. Patent No. 5,691,570) under 35 U.S.C. § 102.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1 and 18 call for, *inter alia*:

at least two groups of metallic bonding pads ..., a first group of the at least two groups of the metallic bonding pads ordered in the standard pin assignment, a second group of the at least two groups of the metallic bonding pads ordered in the mirror-image pin assignment.

The Kozuka reference discloses a first IC (122) and a second IC (124) that are disposed on a single chip (12) (column 4,

01-15-'04 14:03 FROM-Lerner & Greenberg

+9549251101

T-656 P10/13 U-569

Applic. No. 10/010,164
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lines 55-57). Each IC chip is a mirror image of the other (column 9, line 33). Each IC chip contains only one group of bonding pads corresponding to either a standard or a mirror-image configuration.

The reference does not show at least two groups of metallic bonding pads ..., a first group of the at least two groups of the metallic bonding pads ordered in the standard pin assignment, a second group of the at least two groups of the metallic bonding pads ordered in the mirror-image pin assignment, as recited in claims 1 and 18 of the instant application. The IC chip according to the instant application contains twice as many pads as there are bonding points on the interposer. This can be seen in Figs. 4-9 of the instant application. Contrary thereto, the chip disclosed by Kozuka contains the same number of pads as pins (Fig. 16). Kozuka does not disclose at least two groups of metallic bonding pads ..., a first group of the at least two groups of the metallic bonding pads ordered in the standard pin assignment, a second group of the at least two groups of the metallic bonding pads ordered in the mirror-image pin assignment, as recited in claims 1 and 18 of the instant application.

In the second paragraph on page 4 of the Office action, claims 2-17 have been rejected as being obvious over Kozuka (U.S.

01-15-'04 14:03 FROM-Lerner & Greenberg

+9549251101

T-656 P11/13 U-569

Applic. No. 10/010,164
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Patent No. 5,691,570) under 35 U.S.C. § 103. Since claim 1 is believed to be allowable, dependent claims 2-17 are believed to be allowable as well.

Even though the claims are believed to be allowable, the following remarks are given.

In the present invention, the presence of the two distinct groups of bonding pads on the IC chip allows the same chip to be mounted in either the standard or mirror-image orientation without any change in the chip layout. This can be achieved as follows: In the first embodiment of the present invention, by rotating the chip; in the second, by a translational movement of the chip; and in the third embodiment, by making contacts to one of the groups of pads which are positioned in a single row on the chip.

It is not possible to mount the chip disclosed in Kozuka in both the standard and mirror-image configurations. As can be seen in the abstract of Kozuka, he teaches the manufacture of normal and reverse chips. The present invention is a definitive improvement over the prior art because only one type of chip needs to be manufactured. Therefore, the inclusion of two groups of bonding pads in different configurations on a single chip, is inventive.

01-15-'04 14:04 FROM-Lerner & Greenberg +9549251101

T-656 P12/13 U-569

Appl. No. 10/010,164
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It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 or 18. Claims 1 and 18 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-18 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

01-15-'04 14:04 FROM-Lerner & Greenberg +9549251101

T-656 P13/13 U-569

Applic. No. 10/010,164
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Please charge any other fees which might be due with respect
to Sections 1.16 and 1.17 to the Deposit Account of Lerner &
Greenberg P.A., No. 12-1099.

Respectfully submitted,



For Applicant(s)

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